**Year 6 Lynnfield Curriculum Progressions Overview - Maths**

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| **Year 6** | **Autumn** | **Spring** | **Summer** |
| **Objectives** | **Egyptians**  **‘Can you walk like an Egyptian?’ - History (Healthy eaters)** | **The Amazon Rainforest**  **‘Deforestation’ – How WOOD you like it?’ - Geography (Healthy movers)** | **Every BODY changes**  **‘Can you embrace change?’- Science (Healthy thinkers)** |
| **NPVR** | * Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. * Round any whole number to a required degree of accuracy. * Use negative numbers in context, and calculate intervals across zero. * Solve number and practical problems that involve all of the above. | * Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. * Round any whole number to a required degree of accuracy. * Use negative numbers in context, and calculate intervals across zero. * Solve number and practical problems that involve all of the above. | * Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. * Round any whole number to a required degree of accuracy. * Use negative numbers in context, and calculate intervals across zero. * Solve number and practical problems that involve all of the above. |
| **ASMD** | * Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. * Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. * Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context. * Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context. * Perform mental calculations, including with mixed operations and large numbers. * Identify common factors, common multiples and prime numbers. * Use their knowledge of the order of operations to carry out calculations involving the four operations. * Solve problems involving addition, subtraction, multiplication and division. * Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy. | * Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. * Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. * Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context. * Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context. * Perform mental calculations, including with mixed operations and large numbers. * Identify common factors, common multiples and prime numbers. * Use their knowledge of the order of operations to carry out calculations involving the four operations. * Solve problems involving addition, subtraction, multiplication and division. * Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy. | * Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. * Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. * Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context. * Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context. * Perform mental calculations, including with mixed operations and large numbers. * Identify common factors, common multiples and prime numbers. * Use their knowledge of the order of operations to carry out calculations involving the four operations. * Solve problems involving addition, subtraction, multiplication and division. * Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy. |
| **F** | * Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. * Compare and order fractions, including fractions > 1 * Generate and describe linear number sequences (with fractions) * Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example 1/4 x 1/2 = 1/8 ] * Divide proper fractions by whole numbers [for example 1/3 ÷ 2 = 1/6]. * Associate a fraction with division and calculate decimal fraction equivalents [ for example, 0.375] for a simple fraction [for example 3/8 ] * Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. | * Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. * Multiply one-digit numbers with up to 2 decimal places by whole numbers. * Use written division methods in cases where the answer has up to 2 decimal places. * Solve problems which require answers to be rounded to specified degrees of accuracy. * Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison. * Recall and use equivalences between simple fractions, decimals and percentages including in different contexts. |  |
| **Al** |  | * Use simple formulae * Generate and describe linear number sequences. * Express missing number problems algebraically. * Find pairs of numbers that satisfy an equation with two unknowns. * Enumerate possibilities of combinations of two variables. |  |
| **R&P** |  | * Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. * Solve problems involving similar shapes where the scale factor is known or can be found. * Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |  |
| **M** |  | * Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. * Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp. * Convert between miles and kilometres. * Recognise that shapes with the same areas can have different perimeters and vice versa. * Recognise when it is possible to use formulae for area and volume of shapes. * Calculate the area of parallelograms and triangles. * Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3) |  |
| **Sh** |  |  | * Draw 2-D shapes using given dimensions and angles. * Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. * Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. |
| **P&D** | * Describe positions on the full coordinate grid (all four quadrants). * Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |  |  |
| **St** |  |  | * Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. * Interpret and construct pie charts and line graphs and use these to solve problems. * Calculate the mean as an average. |